United States Department of Interior

November 2002

National Park Service

Carlsbad Caverns National Park • Guadalupe Mountains National Park

National Parks Updating Fire Management Plans

The National Park Service is ready to update the Fire Management Plans (FMP) that currently guide actions related to fire at Carlsbad Caverns and Guadalupe Mountains National Parks. The parks are both located in the Guadalupe Mountains and are on track to produce their plans at about the same time. Staffs from the two parks are working together on some parts of this process, including the gathering of public input.

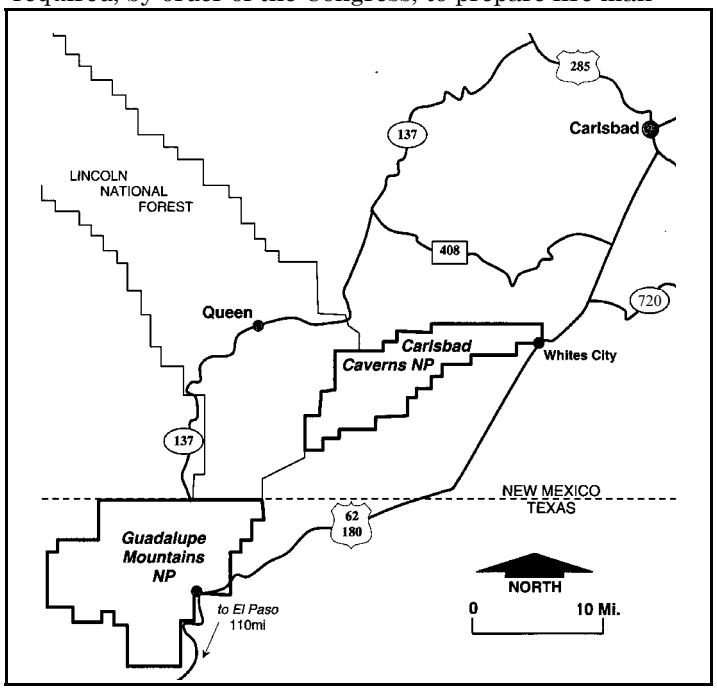
We have sent you this newsletter to:

- Inform you about the fire management planning process
- Solicit your views and suggestions for incorporation into the new plans.

You will notice some duplication of material for the parks in this publication because of overlapping resources and concerns.

National parks with vegetation capable of burning are required, by order of the Congress, to prepare fire management plans. Ideally, parks will revise and improve plans every five years. Carlsbad Caverns developed its current FMP in 1995, and the Guadalupe Mountains plan is dated 1996. The 2003 plans for both parks will incorporate the National Fire Plan, new NPS policies, and advances in fire ecology and management techniques.

This fire planning process includes production of environmental impact statements that examine fire planning alternatives for their environmental effects. Input from the public and other interested parties helps determine the appropriate course of action. We invite you to read over this newsletter, attend a public scoping meeting, contact project team members with questions, and submit your comments.



Public Scoping Open House

for Fire Management Planning

Featuring displays, refreshments, and representatives from both parks to answer questions

Monday, November 18, 2002 in El Paso, TX
6-8 p.m. at Chamizal National Memorial
800 S. San Marcial

Tuesday, November 19, 2002 in Dell City, TX
6-8 p.m. at the Community Building

Wednesday, November 20, 2002 in Queen, NM
6-8 p.m. at the Volunteer Fire Department

Thursday, November 21, 2002 in Carlsbad, NM
6-8 p.m. at the Best Western Stevens Inn
1829 S. Canal

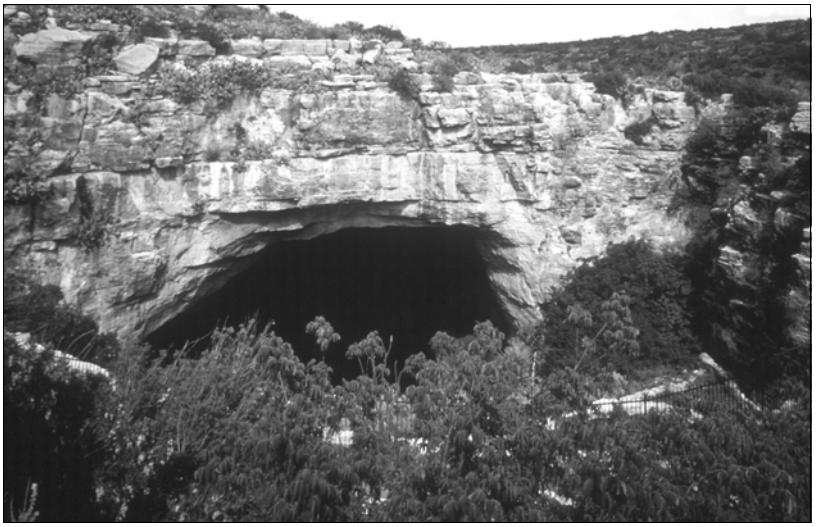
Carlsbad Caverns Notice of Intent (NOI) in Federal Register November 15, 2002

Guadalupe Mountains Notice of Intent (NOI) in Federal Register October 10, 2002

Scoping comment period extends through December 31, 2002 for both parks.

Carlsbad Caverns National Park

Carlsbad Caverns National Park sits on the eastern end of the Guadalupe Mountains in southeastern New Mexico, approximately 20 miles southwest of Carlsbad, New Mexico, and 150 miles east of El Paso, Texas. The park was established in 1923 to preserve the Carlsbad Cavern and the numerous other caves within the Guadalupe Mountains. In 1995, the park was designated a World Heritage Site for the protection of "physical and biological formations which are of universal world-wide value and interest".



The 46,766-acre park contains over 100 known caves, including the famous Lechuguilla Cave. Carlsbad Cavern, with one of the world's largest underground chambers and countless formations, is accessible via walking tours offered year-round. The park also preserves a portion of Capitan Reef—one of the best-preserved, exposed Permian-age fossil reefs in the world.

Carlsbad Caverns National Park is one of the few protected portions of the northern Chihuahuan Desert ecosystem, which yields an astounding abundance and diversity of plant and animal life. Approximately 33,125 acres are Congressionally-designated wilderness. Carlsbad Cavern is the summer home for a world-famous colony of migratory Mexican free-tailed bats. Approximately 750 plant species, 64 species of mammals, and 44 reptiles and amphibians (with an additional 28 species possible) live on the park's surface. The park also supports 331 species of birds (residents or in migration). Desert scrub and grassland are the dominant plant communities, and small pockets of coniferous woodland are found at the higher elevations at the western end of the park. The upland shrub community and riparian Rattlesnake Springs area provide important stopover habitats for migrating birds. Many plants and animals in the park are at the limits of their geographic distribution, including the northernmost colony of migratory cave swallows in the U.S.

Prehistoric human use of the Carlsbad area dates back to at least 8,000 B.C. Park archeological sites record the presence of hunter-gatherer followed by ceramic cultures. Spanish explorers traversed the area in the 16th and 17th centuries, and by the mid-1700s, the Mescalero Apache were commuting between hunting sites and gardens on the flats below the escarpment and their winter retreats in mountain canyons. Cattle drovers established trails in the 1860s, and remains of their camps are still evident. Homesteaders moved in during the 1880s, and many of their descendents live near the park today.

20th-Century Fire at Carlsbad Caverns

Carlsbad Caverns' first fire record is dated 1941. Between then and 1970—the era of suppression—less than 1,000 acres burned, and human carelessness caused most fires.

Cessation of grazing, buildup of fine fuels, and backing off on suppression have brought about a dramatic increase in fire. Tens of thousands of acres have burned since that time, with lightning the most common cause. Half the recorded fires have covered under a quarter acre, and several "large" fires have burned extensive areas during extreme fire seasons. For example, the lightning-caused Cottonwood fire in 1974 covered more than 15,000 acres of the park and adjacent forest. The Big fire of 1990, attributed to human causes, burned more than 33,000 acres of park and national forest land.

Since the 1980s park staff have deliberately burned about 6,700 acres to reduce hazardous fuels and benefit plant communities adapted to fire.

Guadalupe Mountains National Park

The Guadalupe Mountains rise abruptly from the Chihuahuan Desert plains along the Texas-New Mexico border about 110 miles east of El Paso. This mountain mass forms a portion of the world's most extensive Permian limestone fossil reef. The 86,416-acre Guadalupe Mountains National Park sits at the southern end of this rugged range. In addition to significant geological features, the park hosts a diversity habitats for plants and animals over its 5,000-foot elevational range. The mountain's ecosystems are home to over 1200 species of plants, 60 species of mammals, 303 species of birds, and 55 species of reptiles and amphibians. Also featured are Guadalupe Peak, highest point in Texas at 8,749 feet; El Capitan, a massive limestone formation; McKittrick Canyon, with its beautiful riparian deciduous woodland; and the "Bowl", located in a high country conifer forest.

For many centuries, the remote Guadalupe backcountry was the domain of the Ndé (Mescalero Apache). In the 1880s, the Guadalupe Mountains became the last stronghold for Apache chief Victorio, whose last battle with the legendary “Buffalo Soldiers” of the 9th and 10th Cavalry Regiments occurred not far to the south. Ranching played a prominent role in the history of the area, as did the Butterfield Overland Mail Stage which ran through Guadalupe Pass for a brief time. Approximately 5,000 acres of McKittrick Canyon were owned by William Pratt, a petroleum geologist whose love for the beauty of the place moved him to donate the property to the National Park Service in the 1960s for all to enjoy. The park was established by Act of Congress September 30, 1972. Today, the park is a haven for hikers and backpackers from all over the world who marvel at its outstanding geology as they experience the grand expanses of its deserts, chaparral-covered slopes, canyon woodlands, and forested highlands.

Existing Fire Program at Guadalupe Mountains

Guadalupe Mountains National Park’s first fire management plan was approved in 1975, when full suppression was the rule. The existing (1996) plan allows “full spectrum” fire management, including wildland fires to achieve resource management goals. Wildland fires are permitted to burn only when they meet predetermined sets of environmental conditions or “prescriptions.”

The park averages five wildfires per year, and lightning is by far the most common cause (about 84% over the period of record). These fires tend to be less than ten acres in size. Large fires do occur on occasion, particularly in years of extreme fire conditions. The lightning-caused Frijole fire of 1990 covered approximately 5500 acres along the eastern escarpment. Fires in both 1993 and 1994 each burned over 5000 acres in the park.

Fire Planning Issues at Carlsbad Caverns NP

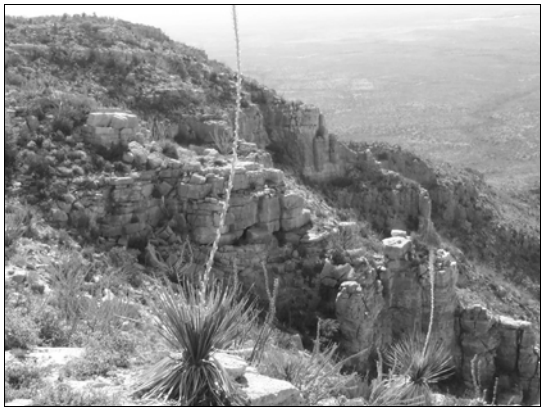
The planning process must address important environmental issues—effects of the fire management plan that could be issues of concern. Damage to cultural resources from fire might potentially be permanent. Fire also may alter the ecosystem trajectory of a landscape, leading to long-term impacts on vegetation and wildlife distributions. The other issues represent short-term effects, most of which disappear either immediately after or within a few years of the fire. In the fire-adapted systems at the park, the short-term effects on plants, animals, and unique ecological sites may ultimately translate into long-term benefits. While prescribed burns to reduce fuel loads may minimize the risk of fire in general, they do not prevent widespread, wind-driven fires that occur infrequently in the area.

Concern	Issues	Opportunities/Mitigation
Life and Property	Fire is an effective tool for reducing hazardous fuels, but can pose a risk to firefighters, park staff, developed areas, and the public.	Safety is the highest-level consideration. The fire management plan will dictate very specific actions for contingencies when life and property are threatened.
Cultural Resources	Unknown or unprotected historic structures and artifacts may incur damage directly from fire or from suppression activities.	Prescribed fire, wildland fire, and mechanical fuel reduction are tools to reduce fuel loading around structures and sites. Fire avoidance will be dictated for the most sensitive areas within the park.
Wildlife Habitat Change	Fire has the potential to harm or change wildlife habitat, causing some species to decrease in abundance and others to become more abundant.	Prescribed burning allows for more control over fire. Low- to moderate-intensity fire thins crowded stands, maintains habitat mosaics, and reduces fuel loading that contributes to catastrophic wildfire.
Exotic Species	Prescribed and wildland fire, mechanical fuel reduction, and suppression activities can all promote certain exotic species that invade disturbed areas.	Research programs can increase our understanding of fire effects on non-indigenous species. Many native species respond positively to vegetation thinning and material-cycling effects of fire.
Endangered and Sensitive Species	Fire management activities may effect threatened, endangered, or sensitive species.	Low intensity prescribed fires can be conducted to minimize damage, but fire avoidance may be necessary for areas with highly sensitive species. Wildlife may ultimately benefit from fire-renewed habitats.
Neighbors	Park neighbors are concerned with fire crossing park boundaries.	Prescribed burns and mechanical fuel reduction may minimize risk of fire escape. The park is diligent in informing interested parties about pending burns.
Tourism	Local businesses may experience temporary declines in business if park visitation declines due to fire.	Wildland fire use and prescribed fire decrease the chance for catastrophic fire that would affect tourism in a much more drastic and negative way.
Changes in Landscape-scale Vegetation Patterns	Fire on too large or intense a scale damages aesthetics and distorts the traditional “look” of the park.	Some vegetation, such as interior chaparral, naturally experience infrequent, stand-replacing fires. Prescribed burning provides more control over fire effects.

Fire Management Alternatives at Carlsbad Caverns National Park

The Carlsbad Caverns planning team identified five fire plan alternatives at its internal scoping meeting June 5-6, 2002. Two of these alternatives are considered infeasible based on current policy and safety considerations. We invite you to comment on any of the five alternatives below or suggest others.

Research Prescribed Fire
An alternative that restricts the use of prescribed fire is proposed based on the argument that not enough is known about fire effects on the park's ecosystems. Under this alternative the park would be divided into three fire management units (FMUs) similar to those under the No Action (1995 FMP); a wildland fire use unit where natural ignitions could burn in the park's interior, a conditional suppression unit out to park boundaries, and a full suppression unit around developments and along the east-side boundary. Wildland fire use would be permitted in the appropriate FMUs when natural ignitions looked like they could satisfy safety and resource protection conditions. Prescribed fire would not be an option except for the purposes of research. Research fire would be allowed in all units to improve understanding of fire's role in the park's vegetation communities. Cooperation with neighboring agencies is also a feature of this alternative.



Reason for dismissal: This alternative recognizes our understanding of fire's role in Chihuahuan Desert scrub communities is incomplete. However, prescribed burning is an extremely useful tool for reducing hazardous fuels. Substituting mechanical thinning is not feasible in problem fuel areas, and thinning results in slash piles that need to be burned.

Maximum Fire Use
If the long-term health of Carlsbad Caverns' plant communities is to be assured, it can be argued that reestablishing and maintaining fire as a dominant factor in ecosystem function is necessary. This alternative would allow all naturally ignited fires to burn within the park, and would allow prescribed fire for fuel reduction and resource benefit. The plan under this alternative would protect individual features and structures with small buffer zones but otherwise permit fires to burn unless conditions were unsafe. Fires would be suppressed at the park boundary.

Reason for dismissal: Deciding whether to fight fires burning very close to places that require protection on a case-by-case basis would be prohibitively complicated and time-consuming. In inhabited areas there would be no safety margin for sudden changes in fire conditions.

The following alternatives are proposed for full consideration and analysis in the environmental impact statement:

No Action: 1995 FMP
The existing (1995) fire management plan uses three FMUs defined according to safety-related criteria. The Natural Fire Zone is centered within the park and allows natural fires to burn (wildland fire use) due to its wilderness character and distance from park boundaries. The Conditional Suppression Zone runs along most of the park boundary. Suppression here is not automatic; fire use may be applied if conditions are judged acceptable. The Suppression Zone calls for automatic suppression around the Visitor Center, other developments, and White's City at the far east end of the park. Unplanned ignitions by humans are not allowed to burn in any FMU. A 2002 clarification of the 1995 plan halts all prescribed burning until a new FMP is in place. This current plan expires in 2004 at which time No Action would then dictate full suppression of all ignitions, with no prescribed fire for any purpose.

Full Toolbox
This alternative is a fully integrated fire management plan that allows resource managers to use all available strategies. It defines a relatively small FMU 1 surrounding the Visitor Center, facilities, and residences, and the area of the park adjacent to White's City. FMU 1 applies full suppression and prescribed burning. The rest of the park embraces wildland fire use, prescribed fire, suppression, and mechanical fuel reduction as management options. This second FMU specifies protection measures for special features, such as habitat of threatened and endangered species and sensitive cultural resources. Ideally, the park would cooperate with neighboring agencies and private landowners on prescribed fire, wildland fire use, monitoring fire effects, and suppression activities, and fires would not be automatically suppressed at the park boundary.

Limited Rx
This alternative does not allow wildland fire use as a management tool, in keeping with the preference of the state of New Mexico that wildland fires be suppressed. Containing fires within the park would be necessary. Conservative use of prescribed fire for fuels management or research is an option, but only under conditions that limit risk of escape to the fullest extent possible. Because fire management strategies would not differ for any area of the park, only one FMU is defined under this alternative. Major mechanical fuel reduction would be needed to protect park developments, sensitive resources, and adjoining properties.

Fire Planning Issues at Guadalupe Mountains NP

The planning process must address important environmental issues related to management of fire at the park. These issues are effects of the FMP that could be beneficial, problematic, or controversial. Damage to cultural resources from fire might potentially be permanent. The other issues represent short-term effects that disappear either immediately after or within a few years of the fire. In fire-adapted systems such as those at Guadalupe Mountains National Park, the short-term effects on plants, animals, and unique ecological sites ultimately translate into long-term benefits.

Concern	Issues	Opportunities/Mitigation
Life and Property	Fire is a threat to the public, firefighters, park staff, and developed areas.	Safety is the highest-level consideration. The fire management plan dictates actions for contingencies when life and property are threatened.
Vegetation & Wildlife	Fire will kill and injure some plants and wildlife.	Fire thins crowded stands and promotes sprouting and germination of many plant species. Wildlife benefits from fire-renewed habitat.
Geology & Geohazards	Fire can damage fossil resources. Removal of vegetation by fire can increase erosion and flooding.	Prescribed fire can be managed to limit impacts to sensitive resources. Erosion and sedimentation are natural processes associated with fire.
Air Pollution	Smoke from fires can be unhealthy and impact visibility.	Prescribed burns that reduce fuels are conducted only under strictly defined conditions that minimize potential for unhealthy air quality.
Visitor Experience	Restrictions on access to burning areas, road closures, and smoke can inconvenience visitors.	Prescribed burning limits severe fires that create major inconveniences. The park can use the occasion to inform visitors of the role of fire in ecosystems.
Cultural & Ethnographic Resources	Historic structures, landscapes, and artifacts may incur fire damage.	Prescribed burning will reduce fuel buildup near structures and sites. Fires often reveal new archeological sites. In the fire plan, suppression is dictated for highly sensitive areas.
Unique Sites & Sensitive Species	Fire could alter exceptional scenic values and harm endemic or uncommon species.	Prescribed fire can be managed to minimize impacts. Fire promotes plant germination and renews habitat for many wildlife species.
Landscape Effects	Large-scale fire is detrimental to aesthetics and mosaic patterns. Problem fuels may be difficult to manage.	Prescribed burning allows for more control over fire timing, location, and effects. Mechanical thinning may reduce the threat of large-scale fires.
Non-indigenous Species	Fire effects on most non-indigenous species are unknown.	Many native species respond positively to renewing effects of fire. Research can increase understanding of fire effects on non-indigenous species.

Fire Management Alternatives at Guadalupe Mountains National Park

The Guadalupe Mountains planning team identified five fire plan alternatives at its internal scoping meeting March 12-13, 2002. Two of these alternatives are candidates for dismissal based on current policy and safety considerations. We invite you to comment on any of the five alternatives below or suggest others.

- **Total Suppression**

In today's more enlightened climate relative to fire, this option might seem extreme. However, at Guadalupe Mountains concern about (1) safety of visitors (particularly backcountry campers) and staff, (2) historic structures and landscape features, and (3) spread of fire to neighboring properties make total suppression a legitimate consideration.

Reason for dismissal: Fire is clearly needed to restore some park plant communities to health and renew wildlife habitat. The park staff has the experience needed to allow fires to burn safely. It is National Park Service policy to restore fire into ecosystems where it previously occurred naturally.

- **Full Wildland Fire Use for Resource Benefit**

Concern about the long-term health of plant communities puts the other extreme option on the table. If the park's forests, woodlands, and grasslands are to move back to their "natural" state, it could be argued that all fires should be allowed to burn. Because the preservation of life and property is the priority for fire management operations, the plan under this alternative would protect individual features and structures with small buffer zones and otherwise permit fires to burn unless conditions were unsafe.

Reason for dismissal: Administrative considerations decrease the attractiveness of this alternative. Appropriate decision-making on a case-by-case basis would be prohibitively complicated and time-consuming. Moreover, decision-makers would always need to be present to decide whether to fight fires burning very close to places that require protection. In inhabited areas there would be no safety margin for sudden changes in fire conditions.

The following alternatives are proposed for full consideration and complete analysis in the environmental impact statement:

- **No action: Existing Plan**

The existing (1996) Fire Management Plan uses four Fire Management Units (FMUs), defined by their distinctive topographic and plant-community characteristics. Across these FMUs are overlaid three fire management zones. These three zones allow wilderness and non-wilderness fire use, alternative suppression, and prescribed fires. Wildland fire use for resource benefit (formerly called prescribed natural fire) is an option when lightning fires coincidentally meet objectives defined by park managers. Under this plan, strict conditions for wildland fire use have prevented the park from letting natural ignitions burn. Prescribed fires are planned burns deliberately set to achieve management objectives such as restore grasslands or thin woodlands. Unplanned ignitions by humans are not allowed to burn in any FMU.

- **Two-FMU Alternative**

This alternative defines a relatively small FMU surrounding the visitor center area and the facilities and residences south of the highway. This FMU applies full suppression and prescribed burning. The rest of the park comprises the second FMU, with protection and suppression emphasis for special features, such as historic properties, McKittrick Canyon, and habitats of threatened and endangered species. In the second FMU, wildland fire use, prescribed fire, and suppression are management options. This alternative recognizes that restoring fire, using a mixture of prescribed fire and wildland fire use, benefits park ecological communities. Fires would be suppressed at the park boundary.

- **Cooperative Watershed Plan**

This alternative is a variation on the two-unit plan that extends the backcountry FMU along the north boundary to include portions of the McKittrick Canyon watershed that lie on USDA Forest Service land. Ideally, the park would cooperate with the forest service on prescribed fire, wildland fire use, fire effects monitoring, as well as suppression activities. Suppression would be the rule along portions of the park boundary adjacent to private property. This cooperative plan would be a step toward multi-agency management of the entire Guadalupe Mountains landscape sometime in the future.

Carlsbad Caverns National Park Statistics

Established: October 25, 1923
(Given NP status on May 14, 1930)
Present Size: 46,766 acres
Wilderness: 33,125 acres, established 10-20-78
2001 Visitation: 451,343
FY 2002 Budget: $5,236,000

Peak Fire Season: early May to mid-August
Average Annual Precipitation: 15 inches at the VC
January Average Temperatures: 51°F max, 29°F min
July Average Temperatures: 91°F max, 67°F min
Cavern Temperature: 56°F year-round
Air Quality: Class I attainment area

Camping: Backcountry only
Miles of trail: 44
Known Limestone Caves: more than 100

Contact information for Comments

write to the Superintendent at:
Fire Management Plan
Carlsbad Caverns National Park
3225 National Parks Highway
Carlsbad NM 88220
Email: cave_planning@nps.gov
Fax: 505-785-2317

Guadalupe Mountains National Park Statistics

Established: September 30, 1972
Present Size: 86,416 acres
Wilderness: 46,850 acres, established 11-10-78
2001 Visitation: 208,198
FY 2002 Budget: $2,332,000

Peak Fire Season: early May to mid-August
Average Annual Precipitation: 19 inches at Pine Springs, 24 inches in the high country
January Average Temperatures: 53°F max, 30°F min at VC
July Average Temperatures: 88°F max, 63°F min at VC
Air Quality: Class I attainment area

Campgrounds: 2 front-country and 10 back-country
Miles of trail: 89
Low Point: 3,620 ft (western edge)
High Point: 8,749 ft (Guadalupe Peak)

Contact information for Comments

write to the Superintendent at:
Fire Management Plan
Guadalupe Mountains National Park
HC 60, Box 400
Salt Flat TX 79847
Email: gumo_superintendent@nps.gov
Fax: 915-828-3269

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NATIONAL PARK SERVICE
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